

Baylor
College of
Medicine®

**CARDIOVASCULAR
RESEARCH INSTITUTE**

CVRI Newsletter

Spring/Summer 2018



2018 Symposium Best Abstract Winners (from left to right):

Sunil Verma, PhD (junior faculty category), Katherina Alsina, BS (student category), Anum Saeed, MD (clinical fellow category), and Pingping Ren, MD, PhD (postdoc category)



2018 Symposium Best Poster Winners (from left to right):

Ashish Rao, MS (student category) and Satadru Lahiri, PhD (postdoc category)

Not pictured: Khurrum Khan, MD (clinical fellow category) and Parag Jain, MD (junior faculty category)

Sixth Annual Symposium Highlights

Precision medicine was the focus at Baylor College of Medicine's sixth annual Cardiovascular Research Institute Symposium held April 10th, 2018. Led by Dr. Xander Wehrens, director of the CVRI, and Dr. Biykem Bozkurt, associate director, the symposium brought together clinicians, researchers and students working to find new insights and solutions to cardiovascular medicine.

The event was kicked off by Dr. Adam Kuspa, senior vice president and dean of research at Baylor, who reflected on the history of cardiovascular research at the College and the important role Dr. Michael E. DeBakey played in cardiovascular breakthroughs while at Baylor.

He also discussed the record year Baylor research had when it came to peer-reviewed funding.

“We’ve had more than \$400 million in support, which is a reflection of how the community views the importance of the work from Baylor researchers and the promise of research taking place now and in the future,” Kuspa said. “One of the goals of Baylor College of Medicine is to improve human health through research and support collaboration through events such as the Cardiovascular Research Institute symposium.”

Speakers from BCM, The University of Texas Health Science Center at Houston and The University of Texas Medical Branch gave presentations throughout the day that ranged from cardiovascular disease prevention and genetic analysis of early onset aortic valve disease, to the role of RNA binding proteins in human heart disease.

Keynote Speakers

This year’s symposium featured two keynote lectures.

First, [Dr. Eric Olson](#), the Annie and Willie Nelson Professor in Stem Cell Research and director of the Hamon Center for Regenerative Science and Medicine from The University of Texas Southwestern in Dallas, focused on the promise of new gene therapy approaches to treat muscle diseases.



**CVRI's Associate Director, Biykem Bozkurt, M.D., Ph.D.,
presents the keynote plaque to Eric Olson, Ph.D**

Olson discussed his work using CRISPR mediated gene editing to correct genetic mutations that cause Duchenne muscular dystrophy, which affects muscle tissue including the heart. Olson talked about his work with a young man living with the disease and how in the lab, he was able to repair cardiomyocytes (cardiac muscle cells) that were not functioning properly due to the disease.

The second keynote lecturer was [Dr. John Cooke](#), the Joseph C. “Rusty” Walter and Carole Walter Looke Presidential Distinguished Chair and director of the Center for Cardiovascular Regeneration at the Houston Methodist Research Institute. His talk was titled “Innate immune signaling and epigenetics in nuclear reprogramming.”



CVRI's Director, Xander Wehrens, M.D., Ph.D., presents the keynote plaque to John Cooke, M.D.

Cooke described his research that focuses on vascular regeneration and transdifferentiation, showing that activation of innate immune signaling allows for changes in expression and activity of epigenetic modifiers, which is required for nuclear reprogramming. As a result a cell can increase its genetic response to challenge pathogens or tissue injury.

"This year's symposium brought together over 200 physicians and scientists from various institutions in the Texas Medical Center. The

lectures showcased the breath of cardiovascular innovation ranging from work on new cardiovascular risk genes to the development of stents designed for children with congenital heart disease. Our keynote speakers were particularly impressed by the level of engagement of the trainees who presented 85 posters during the symposium."

- Xander Wehrens, M.D., Ph.D.

CVRI Director



Poster Sessions and Awards

Prior to the symposium, four authors from each award category (junior faculty, clinical fellow, postdoc and student) were selected based on prereviewed abstract scores to present their projects during the lecture portions on symposium day. The four selected abstract presenters and their topics were:

(Group photo of winners shown above.)

Sunil Verma, Ph.D.

Junior Faculty Best Abstract

Biochemistry and Molecular Biology, The University of Texas

Throughout symposium day, posters were displayed and presented by authors on their latest research. During the three poster sessions, authors were able to share their work with judges and those in attendance. The presentations highlighted the strengths and innovations of such research at the institute and attracted individual posters that demonstrated the breadth of such research at Baylor and throughout the Texas Medical Center as a whole.

The highest scored poster presenters

Medical Branch at Galveston
*Rbfox2 function in RNA metabolism
is impaired in hypoplastic left heart
syndrome patient's hearts*

Katherina Alsina, B.S.
Student Best Abstract
Integrative Molecular and
Biomedical Sciences, BCM
*Downregulation of protein
phosphatase 2A regulatory subunit
B56A promotes atrial fibrillation*

Anum Saeed, M.D.
Clinical Fellow Best Abstract
Center for Cardiometabolic Disease,
BCM
*Global cardiovascular disease
events in older adults: a short-term
risk assessment and prediction
approach from the atherosclerosis
risk in communities (ARIC) study*

Pingping Ren, Ph.D.
Postdoc Best Abstract
Surgery, BCM
*Targeting necroptosis to prevent the
development of sporadic aortic
aneurysm and dissection in mice*

in each award category and their
topics were:

(Group photo of winners shown above.)

Ashish Rao, M.S.,
Student Best Poster
Molecular and Cellular Biology, BCM
*Tissue specific expression of
expanded cug repeat RNA
reproduces cardiac features of
myotonic dystrophy type 1*

Satadru Lahiri, Ph.D.,
Postdoc Best Poster
Molecular Physiology and
Biophysics, BCM
*Role of a novel calpain-mediated
regulation of junctiphilin-2 (JPH2)
in heart failure*

Khurram Khan, M.D.
Clinical Fellow Best Poster
Medicine, BCM
*Door-in door-out time in stemi:
underachieved and modifiable*

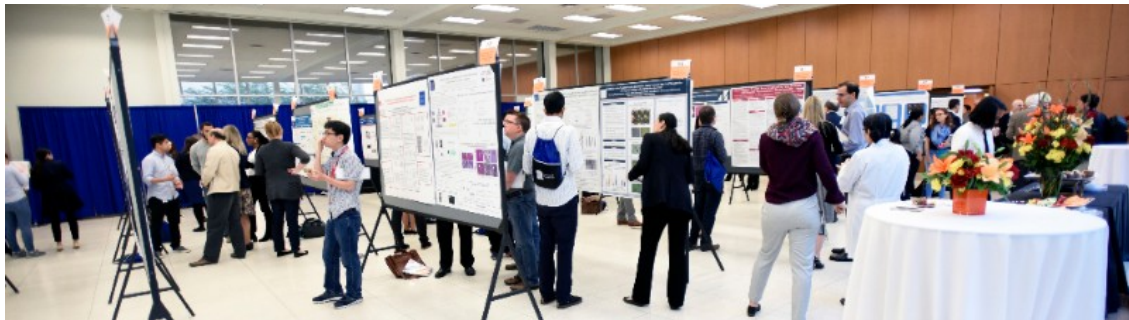
Parag Jain, M.D.
Junior Faculty Best Poster
Pediatric Critical Care Medicine,
BCM
*Detection of integrated
epigenomic/transcriptomic*

*biomarkers for improved care of
congenital heart disease patients
after cardiopulmonary bypass
surgery*

Winners were announced during the symposium's afternoon awards ceremony and each presented with a plaque plus a monetary prize.

Below are more photos from the symposium. To see the 2018 symposium's full gallery, [click here](#).





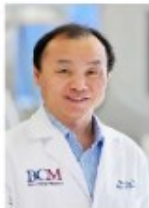
Seminar Series

Fall 2018

The CVRI conducts a monthly seminar series (lunch provided) during the spring and fall of each new year open to all interested faculty, trainees and students.

CARDIOVASCULAR RESEARCH INSTITUTE

Fall 2018 Seminar Series Speaker Line Up



Huaizhu Wu, M.D.

**Associate Professor, Medicine Athero & Lipo
Baylor College of Medicine**

Monocyte phenotypes and atherosclerosis in hyperlipidemia

Sept. 12, 2018, noon – 1 pm: Room 301A, Cullen Building, 1 Baylor Plaza



Thomas Cappola, M.D.

**Professor, Medical Sciences and Chief, Division of Cardiovascular Medicine
University of Pennsylvania**

Topic to be announced

Oct. 10, 2018, noon – 1 pm: Room 301A, Cullen Building, 1 Baylor Plaza



Wendy Chung, M.D., Ph.D.

**Professor, Pediatrics and Medicine
Columbia University**

Use of genomics to understand broken hearts and implications for clinical care

Nov. 7, 2018, noon – 1 pm: Room 301A, Cullen Building, 1 Baylor Plaza



Charles Lin, Ph.D.

**Assistant Professor, Molecular and Human Genetics
Baylor College of Medicine**

Targeting chromatin remodeling in cardiovascular disease

Dec. 12, 2018, noon – 1 pm: Room 301A, Cullen Building, 1 Baylor Plaza



Congratulations to CVRI member, [Erin Reineke, PhD](#), for winning the senior division's Young Investigator's Award at the 37th Annual North American Meeting of the International Society for Heart Research ([ISHR](#))! Her manuscript titled, "*Transient activation of AMPK preceding left ventricular pressure overload preserves left ventricular function and reduces adverse remodeling,*" focused on the role of SRC-2 (Steroid receptor coactivator –2) in adaption of systolic overload.

Awardees were chosen based on the quality of an unpublished manuscript in the area of cardiovascular biology, their CV, support letter from the dept. chair and an oral presentation for the finalists at the meeting.

Reineke is a proud mentee of Drs. Dale Hamilton from Houston Methodist, Mark Entman from Baylor College of Medicine and Heinrich Taegtmeyer from UT Health Science Center at Houston.

In addition to Dr. Reineke's win, Ms. Katherina Alsina, BS, a BCM student in Dr. Xander Wehrens' lab, was also a top 3 finalist in the junior scientists division. She was also a best abstract winner at this year's CVRI symposium.

The CVRI is proud of its members and continues to encourage mentorships and collaborations. Reineke and Alsina are great representations of the high caliber cardiovascular research right here in the Texas Medical Center.

Funding Opportunities

[T32 Training Program for Institutions That Promote Diversity](#)

[R01 NIOSH Mentored Research Scientist Development Award](#)

[UM1 Cardiothoracic Surgical Trials Network \(CTSN\) Linked Clinical Research Centers](#)

News

[Na Li lab finds signals in heart muscle cells linked to atrial fibrillation](#)

[Grant to fund study on gender differences in aortic disease](#)

[Dr. Gabriel Loor Patents Cardiac Surgical Trainer](#)

[Dr. Scott LeMaire Appointed as Inaugural Howell Professor](#)

Learn about Dr.
O. Howard
Frazier, a
pioneer in the
field of heart
transplantation.

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